

REMARKS

I. Status of the Claims

Claims 1-3 and 5-7 are pending in the application. Claims 4 and 8 have been previously cancelled. Claim 9 is withdrawn from consideration. Claims 1-3 and 5-7 stand rejected.

Applicants thank the Examiner for indicating allowable subject matter in claim 6. See Office Action at 11-12. Applicants amended pending claims 1 and 5 to recite the limitations in claim 6 and cancelled claim 6. Therefore, claims 1 and 5, as amended, are allowable at least for the reasons that claim 6 is allowable. Applicants also amended the pending claims to more particularly point out and distinctly claims what Applicants regard as the invention. Support for this amendment can be found in the as-filed specification and the original claims. No new matter was introduced by the amendments. Applicants request reconsideration and allowance of the claims in view of the amendments and remarks in the following.

II. Priority

The Examiner indicated that Applicants have not filed a certified copy of the Korean Application as required by 35 U.S.C. § 119(b). Applicants enclose a certified copy of the Korean Priority Application. Applicants acknowledge that:

“[t]he applicant should provide the required translation if applicant wants the application to be accorded benefit of the non-English language application. Any showing of priority that relies on a non-English language application is *prima facie* insufficient if no certified translation of the application is on file.” MPEP 2304.01(c).

Applicants preserve the right to obtain and submit such an English translation if necessary.

III. Amendments to the Specification

The Examiner objected to the disclosure for the appearance of box symbols. See Office Action at 3. Applicants submit the attached copies of the substitute specification (a clean version and a marked up version) to correct the typographic errors. In the as filed specification, symbols for temperature ($^{\circ}\text{C}$), enthalpy (ΔH), etc. are shown as box symbols throughout the document. One skilled in the art would readily appreciate that these are inadvertent print errors. Therefore, no new matter has been introduced in the substitute specification. Applicants respectfully request the entry of the substitute specification and the withdrawal of the objection.

IV. Claim Interpretation

The Examiner interpreted claims 1-3 and 5-7 as Jepson format claims since the original claims employ the phrase "the improvement comprising." See Office Action at 3. Applicants disagree for at least the reason that the claims have been previously amended to remove the phrase in the "Amendment and Response to Restriction Requirement" filed April 30, 2007. The pending claims are not in Jespson format.

V. Claim Rejections

1. Claim Rejections under 35 U.S.C. § 112

The Examiner rejected claim 7 under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See Office Action at 4. In particular, the Examiner

questioned “whether the system is applied to other systems which produce the claimed by-products or use the claimed resources therein or if the system itself contributes to the processes.” Office Action at 4. Furthermore, the Examiner regarded claim 7 as a use claim which lacks “any active, positive steps delimiting how this use is actually practiced.” *Id.*

Applicants amended the claim 7 to recite that “the feed of CO₂ and CH₄ to said system [of claim 5] is at least partially from a process producing CO₂ and CH₄ as by-products.” See claim 7, as amended. Support for the amendment can be found at page 20, last paragraph in the as-filed specification. Applicants submit that claim 7, as amended, satisfy the requirements of 35 U.S.C. § 112, second paragraph, and request the rejection withdrawn.

2. Claim Rejections under 35 U.S.C. § 101

The Examiner rejected claim 7 under 35 U.S.C. § 101 because the claim recites a use without setting forth any steps involved in the process. See Office Action at 5. Claim 7, as amended, is dependent from claim 5, an apparatus claim. The amendments also clarify that claim 7, as amended, is not a process claim but an apparatus claim. Applicants respectfully require the withdrawal of the rejection.

3. Claim Rejections under 35 U.S.C. § 102

The Examiner rejected

- claim 1 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,656,387 (Barnett). Office Action at 5-6.
- claims 1 and 3 under 35 U.S.C. § 102(b) as anticipated by JP06-342663 (JP '663). Office Action at 7-8.

- claims 1-3 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,500,307 (Anzai). Office Action at 8-9.

The Examiner alleged that the cited references disclose all structural limitations of the claimed invention, despite the fact that none of the references discloses using methane and carbon dioxide as fuel to the SOFC system. Although Applicants disagree with the Examiner's position, in order to advance prosecution, Applicants incorporated claim limitations in the allowable claim 6 into claim 1.

Claim 6 is considered to contain allowable subject matter since "none of the prior art of record reasonably teach, suggest or render obvious the invention of claim 6 wherein the mixed gas has a volume ration as defined therein." Office Action at 11. For at least the same reason, claim 1, as amended, is allowable over the cited references. Claims 2 and 3 are dependent from claim 1, containing all the limitations of claim 1, as amended, and therefore are allowable for at least the reasons that claim 1 is allowable. Applicants respectfully request the withdrawal of the rejections..

4. Claim rejections under 35 U.S.C. § 103(a)

The Examiner has rejected claims 5 and 7 as unpatentable over Barnett, JP '663, or Anzai in view of Staniford et al. "Biogas powering a small tubular solid oxide fuel cell" (Staniford). See the Office Action at 9-11. The Examiner acknowledged that neither Barnett, JP '663, nor Anzai teaches "using a fuel mixture of a hydrocarbon (methane) and carbon dioxide," but asserted that "Staniford recognized that such gas mixtures can be employed as a fuel in SOFC systems so as to produce an acceptable and consistent power output." Office Action at 11. Applicants respectfully disagree.

At the outset, Staniford does not disclose that water is used in the gas feed into the SOFC while claim 5, as amended, requires water in the gas feed. Secondly, Staniford fails to disclose the composition of the gas feed as Applicants do in claim 5, as amended. Neither Barnett, JP '663, nor Anzai cure this defect. Therefore, one of ordinary skill in the art at the time of the invention would not have arrived at the claimed invention by reading Staniford or the other cited references.

V. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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